## (19) World Intellectual Property Organization International Bureau



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(43) International Publication Date 2 June 2005 (02.06.2005)

PCT

## (10) International Publication Number WO 2005/049659 A1

(51) International Patent Classification?: 4/614, B01J 31/38, 31/00

C08F 4/643,

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(21) International Application Number:

PCT/KR2004/002127

- (22) International Filing Date: 24 August 2004 (24.08.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10-2003-0082478

20 November 2003 (20.11.2003) KR

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135-784 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN.

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,

TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ZIEGLER-NATTA CATALYST FOR OLEFIN POLYMERIZATION INCLUDING ARYLOXY GROUP AND METHOD FOR POLYMERIZATION OF OLEFIN USING THE SAME

(57) Abstract: The present invention relates to a Ziegler-Natta catalyst for olefin polymerization and a method for polymerization of olefin using the same. Specifically, the invention relates to a Ziegler-Natta catalyst for olefin polymerization, which is produced by a method comprising a step of reacting a transition metal compound in which the transition metal having an oxidation number of 4 or more is selected from Groups IV, V or VI of the Periodic table and two or more aryloxy ligands are bound to the transition metal, with an organomagnesium compound, to reduce said transition metal compound to a reduced form in which the transition metal has an oxidation number of 3, and a method for polymerization of olefin using said catalyst.